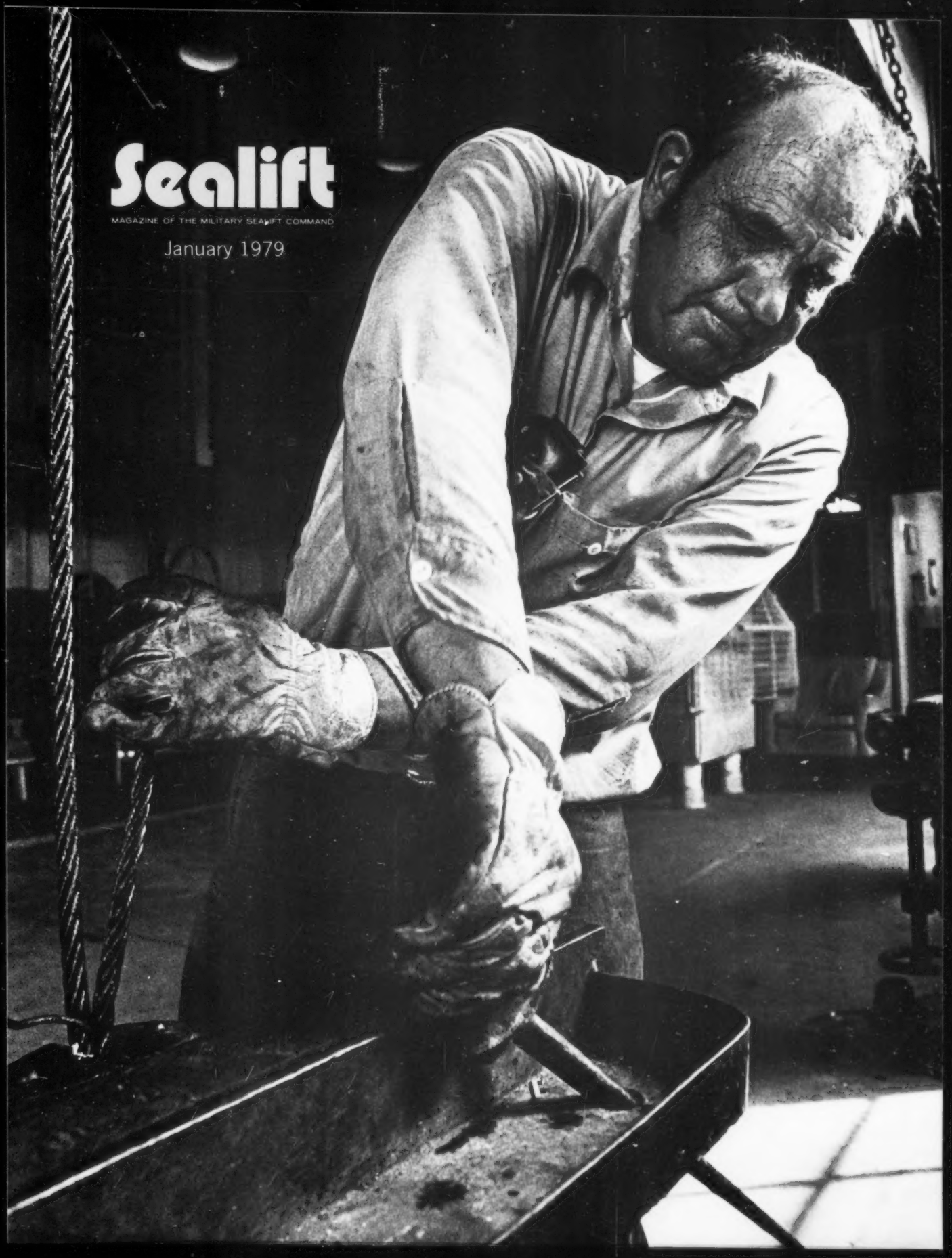


Sealift

MAGAZINE OF THE MILITARY SEALIFT COMMAND

January 1979

Meeting New Challenges

As we close out 1978 I thought it timely to share with all of you my thoughts after 18 months in office.

This has been a very exciting tour, and a great personal challenge. The diversity of MSC interests and its interfaces with other organizations are fascinating. Every day brings something new across my desk.

In those 18 months, I have been able to meet with many members of the MSC team at headquarters and in the field and I continue to be deeply impressed by your dedication and professionalism. I also have been impressed by the strong support of the maritime industry and of the maritime unions, our close partners in the sealift mission.

The seagoing portion of our team, our main battery, has done magnificently and many of our Civil Service and contractor-employed mariners have distinguished themselves in crisis and under stress. As a sailorman I am especially sensitive to the problems of manpower, resources and aging ships which our crews face each day. Your record of accomplishment is impressive in spite of these tough impediments, and I am very proud of you.

The MSC ashore contingent also is beset by the resource constraints so typical of our world today. I am sure that it is often difficult for you to see progress or even the prospect of progress. I do want to assure you, however, that MSC, with your help, is moving ahead in many areas. Your imagination and hard work have already resulted in tighter management, better service and enhanced fleet readiness.

Our Naval Reserve units also have made significant contributions to MSC readiness. These super-dedicated men and women continue to be a vital part of our team.

Last year I expressed my concern to you that MSC did not have the visibilty or recognition it deserves as a major DOD command. I am pleased to report to you that this is turning around, and we are now much more widely recognized as a vital element of the peacetime and contingency mobility team. More importantly, you who are part of our seagoing force are recognized as professionals with a solid record of accomplishment and can-do spirit.

Looking over our shoulder, we can be proud of the service we provided our customers throughout the world during 1978. Our cargo ship and tanker crews have been superb and have met every task with exceptional professionalism. We must not, however, rest on our laurels, for as with any large business undertaking there will always be rough spots and room for improvement. Our goal has been and must continue to be providing the best possible service to the customer at least cost to the government.

That is a tough goal to meet, and we are often torn between inherently conflicting requirements for premium service and bare bones expenditures. All of us must make a special effort throughout the coming year to tighten our management to the maximum and to look innovatively at more efficient ways to lift dry cargo and POL.

A recent major sealift exercise underlined a number of significant problems we have in contingency sealift management and we must work very hard over the next months to strengthen both planning and execution in this vital part of our mission.

Our newly named Naval Fleet Auxiliary composed of former blue jacket assets, the missile resupply ships and the cable layers, is growing rapidly with the actual and planned acquisition of additional tugs and underway replenishment ships. This part of the fleet has done a magnificent job.

Our scientific support fleet has also performed a wide variety of tasks with exceptional skill. The upgrading of

this fleet is under way and the addition of Hess was a major step.

All in all, 1978 has been a very good year. Yet I would be less than candid if I left you with the impression that we did not have serious concerns facing us in 1979, and on into the eighties. At the top of the list is the growing problem of recruiting and retaining civilian mariners. Also high on the list is the problem of adequate staffing ashore to meet the growing scope of MSC tanker operations. Material conditions of ships are another front-running concern.

Other leaders on the "witch list" are the rising cost of doing business and the need to keep dollar costs to the minimum. Safety, ship habitability, management information systems, human resource needs, command control and communications systems and contingency response also are sources of concern for all of us. We do not lack tough challenges to solve. But, I am confident that working as a team we can continue on course, weather the storms and avoid the reefs.

Thank you for your strong support in 1978. My best wishes to all of you this new and, to MSC, critical year.

At the start of 1978 I asked that we be more positive in all we said and did, as groups and as individuals. You did not disappoint me. Now I am asking for even greater efforts because our challenges will be greater in 1979. To that end let us renew our support of our 1978 New Year's resolutions.

** We will never for a moment forget that it is people who make the command what it is and each of us will therefore do our utmost to insure that MSC is a personally satisfying and rewarding place to work.*

** We will be open to ideas of other people, senior and junior alike, recognizing that everyone's ideas, thoughts and feelings are vital to our success. In so doing we shall continually strive to encourage the flow of communication and ideas by all members of the team.*

** We will be candid and honest with one another, sharing our views and our experiences, assuring that all information is available to those who make decisions or develop command policies rather than playing it safe by reporting or suggesting only what we think they may want to hear.*

** We will be always ready to meet any contingency requirement, whether it be the result of a natural disaster, brush-fire conflict or all-out war.*

** Cost effective and reliable service to our "customers" shall be our watchword. We shall never for a moment forget our primary obligation to our customers.*

** We also will exercise imagination and ingenuity in reducing our administrative and overhead costs—saving money and other resources to the maximum extent. No potential savings are too small to escape our attention.*

** We will make a supreme effort during 1979 to dramatically improve our material readiness and to insure the reliability of the assets we have at our disposal.*

** Honestly and frankly acknowledging that we must do an even better job of resource management in 1979, we will concentrate on developing a coherent, systems approach to management of our resources, services and overall organization. We will keep in mind the fact that each individual and unit is a part of the whole and not an autonomous element of our organization for we realize that our strength lies in collective and integrated action.*

** We will do everything possible to enhance the vital interrelationship between the U.S. Merchant Marine and the U.S. Navy and to forge a true partnership between these two key elements of national seapower.*

** We will not be bound by the fetters of the past but will instead use the experience we have gained as a means of advancing our capabilities through imaginative, innovative and forward-looking programs and operations.*

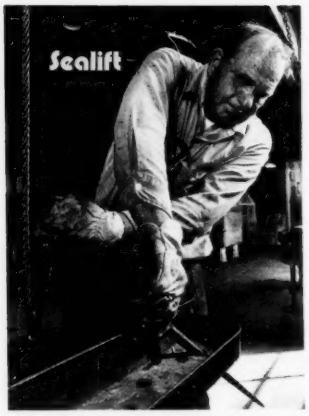
** We shall plan our actions, basing them on fact and analysis of all information available, rather than being content to merely react to events, requirements or assignments levied upon us. We will keep in mind our status as the professional and authoritative voice of sealift within the U.S. Navy and the Department of Defense.*

We can all support those objectives but there is another pledge I continue to make, that *I will support each member of Military Sealift Command and the organization itself to the very limit of my ability and to the full extent of my authority in 1979.*

These are far-reaching resolutions. If we adhere to them we can accomplish a great deal in 1979, at the same time benefiting ourselves. There may be others that should be noted—other actions that need to be taken if we are to help influence our future. I would be happy to receive any suggestions you may have.

Thank you for your support in 1978, and I wish you all a very rewarding and happy 1979.

Commander, Military Sealift Command



COVER: David Fraker has photographed and written about vanishing craftsman known as riggers. Page 12.

Sealift

MAGAZINE OF THE MILITARY SEALIFT COMMAND

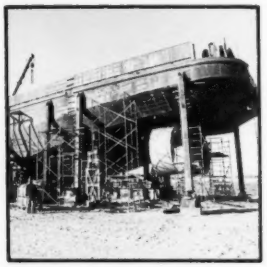
Vol. XXIX No. 1 Washington, D.C. January 1979

Features:

New Breed

USNS Powhatan leads the way into new era for ocean-going tugs.

page 5



Marinette

Midwestern shipyard takes pride in building tugs for the U.S. Navy.

page 8

Moving On

USNS Vanguard ends 12 years of service to NASA.

page 10

Also:

Rigging — 12

Smithsonian — 16

Privateers — 20

Rear Adm. John D. Johnson, Jr
Commander, Military Sealift Command

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A crowd gathers at the dock for the Powhatan ceremony.

USNS Powhatan Leads Way For New Class of Tugs

By Louis R. Granger

Marinette, Wis.—With the theme of quality of life, workmanship and patriotism still in the minds of some 300 visitors to the Marinette Marine Corp., the USNS Powhatan, the Navy's newest oceangoing tug and the first such vessel to be launched in 30 years, was christened by Mrs. Richard A. Stratton, wife of a former Vietnam prisoner of war. Captain Stratton was the principal speaker during the October ceremony.

The ship now is ice-bound on the Menomine River on Green Bay while shipyard workers put the finishing touches to the Powhatan. It will come under the operational control of Military Sealift Command, Atlantic at Bayonne, N.J.

The 226-foot Powhatan, first of its class, is the lead ship in a series of seven tugs to be built by Marinette Marine. All seven will be manned by Civil Service mariners of the Military Sealift Command.

With a fresh coat of grey paint and the MSC insignia and yellow and blue stack markings in place, Powhatan was in sharp contrast with the unfinished hull of the second ship, USNS Narragansett. In October, it yet had to be painted or launched.

Captain Stratton commands Naval Recruiting Area Five at Great Lakes, Ill. He spent six years as a prisoner of war after completing 22 combat missions in an A4 Skyhawk attack bomber over North Vietnam.

Representing Rear Adm. John D. Johnson, MSC commander, was Capt. Herman E. Fritzke, Jr., commander of MSC, Atlantic who noted that "seapower and strategic mobility planning are now inextricably linked to a civilian naval fleet auxiliary that supports Navy fleet operations.

"As each of the follow-on ships of this class is introduced to operational service, our Navy will be that much more versatile and responsive. We of the Military Sealift Command are

Mrs. Stratton christens the Powhatan with a bottle of champagne.

Capt. Henry Pouttu, first master of the Powhatan, admires the baking skills of Eileen Kruhmin, a Marinette Marine draftsman who baked the cake model.

proud of the enviable record of efficiency and economy already compiled by our professional merchant seamen in MSC's short history of fleet support operations."

Captain Stratton told the audience that the Marinette shipyard has had 24 years of continued association with the U.S. Navy.

"The Marinette Marine family means quality. Quality is what we are concerned about, quality of life, quality of work, quality of people who volunteer to serve the national interest in the armed forces."

Noting his years as a POW, Captain Stratton said, "Because we had such riches given to us by our family, neighborhood church and school we were able to build a quality life for ourselves in spite of torture, isolation, beatings, deprivation and humiliation.

"Without any help from the enemy, in the later years of imprisonment, we set up our own schooling, physical education and recreation. All were pointed towards our objective of returning home with honor, that is, to return home in such a way that you would not be ashamed of us, that if there were anything wrong with us it would be because the Communists did it to us, not because we copped out, and did it to ourselves. We succeeded."

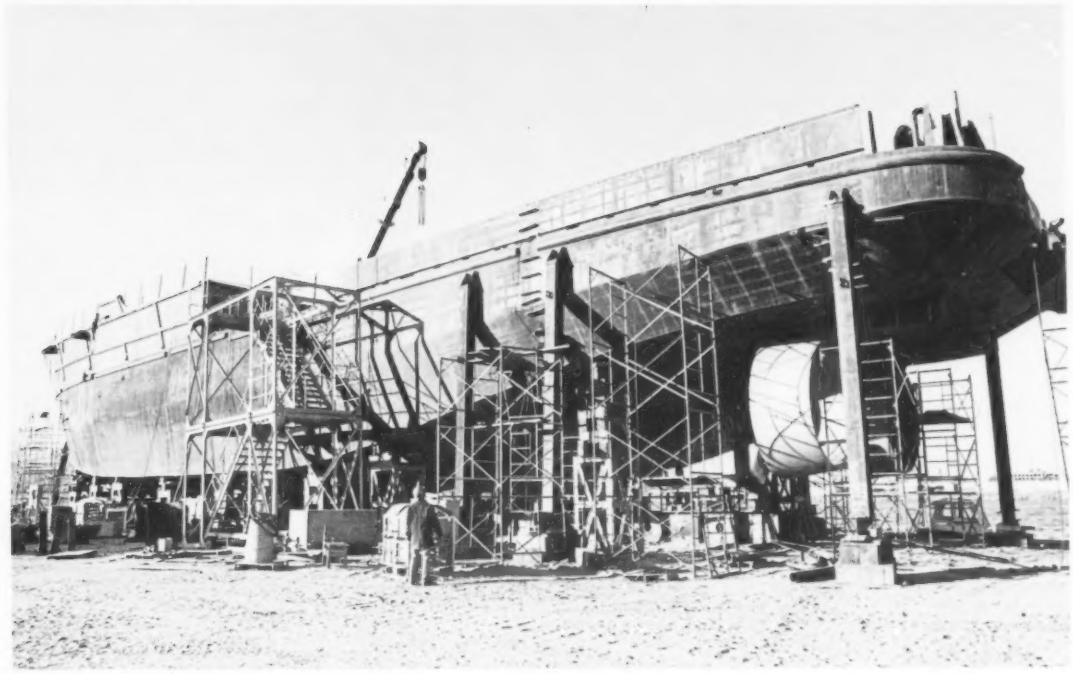
He noted that four former POWs are now admirals. Three command aircraft carriers "and the rest of us are hanging in there."

Quality of the volunteers in the armed forces is high, he said, adding that the United States is the only nation in history that has managed to maintain two million men and women in the armed forces in peacetime with an all volunteer concept and without the threat of a draft.

"The all volunteer service can succeed," he said. "If you are willing to share your children with us for a short time, we will return them to you more mature, better trained and better able to serve their community."

He said that in the past 10 years it has sometimes been unfashionable for young adults to display patriot-

Soon to join the Powhatan will be the sister tug USNS Narragansett.



ism. "But they are patriots. I define a patriot as one who puts country above self. You are patriots when you pay taxes, vote, do public service and perform well on the job."

A quality life means continuous concern, involvement and effort, he said. "We must strive for educational excellence with schools that are academically disciplined. We must not rest until all eligible voters are registered, and turn out at all elections, to select the best of our neighbors to represent us on local, state and national levels. We must insist, as an island nation, on having a Navy, Coast Guard and Marine Corps second to none in weapons and personnel. We must be willing to pay the price for freedom in dollars and dedication."

Captain Stratton said he appreciated the quality of work performed by the Marinette shipyard and its suppliers. "The Navy and the country depend on your doing your best and you have never let us down."

Many persons in the audience were shipyard workers involved in building the Powhatan class tugs, the last of which is scheduled to be delivered in May 1981. The Narragansett is to be delivered this June.

The basic design of the vessels is based on the supply tug used in the offshore petroleum industry. Normally, the ships will be used for towing and will carry a 16-man MSC crew plus a four-man Navy communications department. Navy salvage and diving specialists will go aboard with portable equipment when the ships are involved in salvage or diving operations.

These vessels also will be capable of performing firefighting, dewatering of distressed vessels and oil spill cleanup.

The main differences from the World War II tugs MSC now operates are the large open-weather area on the main deck aft, twin screw reversible pitch propellers, bow thrusters for better maneuvering, higher horsepower and a towing system designed for the standard wire rope and newer synthetic lines. The synthetic towing line (see June 1976 Sealift) will be handled by a traction winch that can handle lines up to 12 inches in diameter.

Habitability standards for the crew are equal to merchant marine civilian standards with single or double rooms, electric heating and air conditioning, a hospital and a self-service laundry.

The ship can carry stores for 45 days but the large after deck allows for replenishment at sea by helicopter.

All of the new tugs will be named for American Indians or Indian tribes. Only four had been named by the end of November. Joining Powhatan and Narragansett will be USNS Catawba and Navajo. The first four will replace the Ute, Lipan, Mosopelea and Atakapa, all now manned and operated by MSC.

Master of the Powhatan will be Henry Pouttu. Chief engineer will be Robert Charlton. ⚓

Marinette Marine, Where Building Small Means Thinking Big

Marinette, Wisc.—Beginning with a World War II Navy contract to build barges for the war effort in the South Pacific, the Marinette Marine Corp. has become the country's largest builder of small landing craft.

Capable of constructing vessels up to 400 feet, Marinette Marine recently completed its largest vessel—a 226-foot oceangoing tug to be operated, beginning next summer, by the Navy's Military Sealift Command.

The company has contracts to build six more tugs which will replace the World War II craft now manned by Civil Service mariners employed by MSC. The tugs will support Navy fleet operations.

Marinette Marine began Navy building in 1942 with a contract to build green lumber barges not designed to survive the war. Marinette subsequently was awarded a contract for a series of wooden harbor tugs which kept the firm busy into 1945.

After the war the company was basically a job shop turning out lawn mower components, wheelbarrows, drilling frames for wells and an occasional steel fishing boat.

The construction of steel gillnetters ended abruptly with the sharp decline of Great Lakes fishing, but contracts with the U.S. Army Corps of Engineers for bridge components and steel river tugs gave the company enough experience and confidence to bid on other steel boat construction.

In 1954 the company again was associated with the Navy when it was awarded a contract to build 148 mechanized landing craft (LCM). Beginning with the 56-foot LCMs, naval landing craft in lengths up to 135 feet have become the firm's principal product.

Although naval craft and commercial boats were the mainstay of the yard in the 50s, the company continued to build other types of steel products such as locks and a bulkhead for the Corps of Engineers, molds, pontoons, mine cars, and truck trailers.

Since 1958, when Marinette Marine obtained a Navy contract for 95 foot patrol boats the company has focused its construction effort on Navy boats and barges including repair, berthing and messing barges, personnel boats, harbor tugs, and utility craft.

In 1963 Marinette Marine began construction of the first Navy vessels of more than 100 feet ever built in its 30-acre yard. These were 209-foot

Marinette engineers check plans for one of seven tugs to be operated by MSC.

Photo by Marinette Marine

oceanographic research ships, Thomas G. Thompson, operated by the University of Washington, and the Thomas Washington, operated by Scripps Institution of Oceanography. Both ships are under technical control of the Oceanographer of the Navy.

The Robert D. Conrad was the first in a seven-ship class. The last two were the USNS De Steiguer and Bartlett. Both are operated by MSC and also are under the technical control of the Oceanographer of the Navy. Conrad is operated by Lamont Geological Observatory of Columbia University. It also is under the technical control of the Navy oceanographer.

The oceanographic ships held the yard record for size until 1975 when the Navy ordered four of the seven fleet tugs (T-ATFs). A follow-on three-ship contract was signed later.

In the mid-1960s, the yard began to phase out its bridge work because it then had the capability of building vessels up to 400 feet. Small-boat building was the direction Marinette Marine was heading although the company contracted with the Caterpillar Tractor Co. in 1971 for the fabrication of hulls and assembly and testing of a rough terrain vehicle for the Army. By 1975 the firm had built 1,300 of the vehicles, turning out two a day.

Although Navy construction has been the primary work at the yard for nearly 25 years, Marinette Marine also does commercial work. In 1976, the company won a $14 million contract from Transway International Corp. for construction of two 150-foot Artubar (articulated tug-barge) tugs. The tugs and integrated 568-foot barges will be used to transport truck trailers between Miami and Latin American ports.

The barges were built by Seatrain Lines, Inc. and have stern notches for the bows of the tugs. Coupling of tug and barge is accomplished by 6½-foot diameter pins which can be extended from the tug hull into matching receptacles on either side of the barge notch.

The family-operated Marinette Corp. is headed by Roger Derusha, president. His two brothers, James, vice president of manufacturing and a director, and Robert, also a director, have engineering degrees from the University of Wisconsin.

In recent years Marinette has used computers to help build ships.

Photo by Marinette Marine

Their father, Harold Derusha, also a director, came to the yard as a mechanic with an eighth-grade education in 1942. By 1954 he controlled a majority interest in the corporation. He retired in 1969 and Roger became president.

Marinette Marine was the first small yard in the country to use computer lofting and computer control flame cutting of steel plate. Lofting is scribing on steel plate where cuts are to be made. From this, a template is made showing all details of the fabrication of each part of a ship. When cutting, a welding torch on a jig is controlled by a computer.

The computer determines plate and structural shape requirements in three dimensions for the entire ship. Instructions are fed by tape to the numerically controlled burning machine which cuts out all the plates required for an entire section or compartment of the ship.

Roger Derusha said the numerically controlled machines "provide much better economy and efficiency when we build more than one ship. Therefore, we lean toward building in multiples although we're certainly capable of building one ship at a time."

Marinette Marine has 2,100 feet of Menominee River frontage of which 1,200 feet is steel dock. Because of bitter cold temperatures that freeze the Great Lakes and close St. Lawrence Seaway in winter, the yard can deliver only eight months a year. However, construction continues all year in 300,000 square feet of space under roof in several buildings.

L.R.G. ⚓

USNS Vanguard Sails For New 'Customer'

By Louis Panarale

Ever since the instrumentation ship USNS Vanguard became a part of the MSC scientific support fleet 12 years ago, the National Aeronautics and Space Administration has had high praise for contributions of the ship and crew in a variety of manned space flight missions.

But time marches on, and with a bit of nostalgia and sentiment NASA announced recently that it no longer needed Vanguard. Sponsorship of the MSC operated Vanguard has since been taken over by the Navy's Strategic Systems Project Office.

Vanguard was assigned to MSC on Oct. 15, 1966 and was the third of three similar ships operated by MSC for NASA. Other ships were the USNS Redstone and Mercury.

Vanguard was one of a five-ship tracking and re-entry coverage flotilla all manned by MSC Civil Service mariners in support of space flight missions such as Apollo, Skylab and Apollo-Soyuz.

Vanguard, Redstone and Mercury "frequently demonstrated their versatility by supporting automated scientific satellite missions," NASA stated in an announcement of release of the Vanguard.

Two smaller manned ships, USNS Watertown and USNS Huntsville, were capable only of covering the reentry of spacecraft. The larger ships supported all aspects of a manned mission as well as those of unmanned scientific satellites.

Through the years, NASA added instrumentation to the Vanguard giving it capabilities that far exceeded those of the other tracking ships.

"It could function as well as any ground tracking station. This means that voice commands, biomedical data, spacecraft environment reports and command-control functions were transmitted and received through the ship direct from the Mission Control Center in Houston," NASA stated.

Together, the MSC manned tracking ships formed a network to make certain there was communication with spacecraft even when out of range of land tracking stations.

Vanguard has been the busiest of all the tracking ships, serving NASA astronauts throughout 10 Apollo, four Skylab and one Apollo Soyuz missions as a floating tracking station. The ship carried out assignments in the Atlantic, Indian and Pacific Oceans.

Distances travelled and hours of mission support have not been totalled for the Vanguard. But space tracking and data network officials at NASA estimate that half of the Vanguard's NASA lifetime was spent in a mission support status. Remainder of the time was spent in port, yard repair or in transit.

The busy Vanguard has been given several nicknames throughout the years. Because it was a vital link in the chain of communications with spacecraft, it was first dubbed "Little Houston."

The comparison was to NASA's Manned Space Control Center at Houston, meaning that the ship and its equipment were as reliable, productive and precise as its land-based counterpart.

Early in its space support career, Vanguard was referred to as the "Moon Ship" since its technical crews tracked, communicated with—and if necessary, commanded—moon bound astronauts when they were beyond the range of land based stations.

The MSC manned vessel later laid claim to the title "Mars Ship" after it supported the landing of space probe vehicles on the planet Mars.

Vanguard did not always look like the sophisticated ship it is today. It is a former World War II tanker that had its midsection cut out and replaced by a longer one which housed NASA electronics and communications gear. ⚓

A rigger connects a sling line to a 90,000-pound bulldozer.

Last of the Riggers, An Endangered Species

Photos and Story
By David Fraker

The men who proudly call themselves riggers were gathering along the pier at the Port of Hueneme, Calif. They were waiting for the Pioneer Moon, a cargo ship.

The fog was thick in the darkness of an early Sunday morning. High intensity sodium vapor lamps were reflected in the water along the piers. An occasional sea gull would dive into the cold gray water and come up with a tasty morsel. Other gulls seemed not to move, except for an occasional wing flutter.

One by one the lights were turned off as dawn approached. Only the incessant sound of a fog horn and the baritone drone of a diesel boat could be heard in the distance. The stern lights of a trawler became dim, finally vanishing into the fog.

As the black and white hull of the Pioneer Moon became visible through the fog, the riggers began to prepare for the day's work.

The profession of rigging is as old as commercial sailing itself and the rigger is a hardy breed who is called upon to work in all kinds of weather, indoors and out.

He is subject to cuts, bruises and broken bones from falls while climb-

Lunchtime for some includes a friendly card game.

ing and attaching rigging to a load, or while working on platforms or other elevated structures.

"The work is dangerous," said Gene Larson, one of the riggers waiting for the Pioneer Moon to dock. "I don't think there is a man here who hasn't received an injury of one sort of another."

Larson is a balding former Navy boatswain's mate with a short, curly, gray beard, with intense, steel-blue eyes and a relaxed and friendly manner.

"One man is missing a finger. Another has injured his back and another his knee," Larson said in listing only a few of the many injuries among his fellow riggers.

It is the riggers job to select and install weight handling gear such as cables, ropes, slings and chains used to lift a variety of heavy equipment, machinery and supply items.

The objects to be moved are usually in open areas of shops, storage facilities or loading docks,

Rigger Gene Larsen likes to grab a couple of winks at lunch time.

Ernie Dyar splices a line.

and are moved by crane or other cargo handling equipment.

The rigger is always on the move as he cuts, splices, assembles and repairs slings, nets, pendants and other gear used in day-to-day operations. His mind has to be as active as his body.

The rigger uses his knowledge of established practices and techniques to install weight handling gear. He must know the breaking strains, safe working loads and other physical characteristics of rigging materials.

He has to be able to determine the center of gravity of large and irregular shaped objects, and know how to place his gear so that the load is safely secured and balanced.

Any part of a load that can be damaged must be covered with boards, mats or planks by the rigger who also controls the drift or swing of a load during movement.

Hand signals are vital for the rigger in communicating with crane operators who hoist and lower a load into a desired location.

The rigger is continually reaching, bending, stooping, pushing and pulling, generally grueling tasks. He occasionally has to use his entire body weight to push suspended loads.

He stands and walks for prolonged periods of time and often climbs about platforms or other structures so that he is in a good position to use his hand signals.

Larsen got out of the Navy when the Korean War was winding down and there was little demand for riggers in the maritime industry. "But I didn't stray too far away," he said. "After learning the trade, becoming a rigger was a natural step. And besides, I never could stand an office job."

Over the years the number of riggers at the Navy Seabee Center at Port Hueneme has decreased from more than 70 to about 12, mainly because of greater use of shipping containers.

Many riggers are former Navy men or Marines. Their average age somewhere in the 40s although a few older men are still active along with an equal number of young ones.

Felipe Porras, 63, says, "I guess being a rigger and working on the waterfront has been in my blood for years. I started on the waterfront in 1939 and have been a rigger for 28 years. Several times I have been offered the job as foreman but each time I turned it down. I am a leader rigger and am happy with that. It isn't worth the hassle for a dollar more an hour."

The Pioneer Moon now is a beehive of activity with cargo being loaded from all directions. The fog has burned off, the sun is shining and there will be no letup in activity until the ship is loaded and the last line is taken in.

Monday is the start of another week for most workers, but for the riggers it is just another day. They sometimes put in 50 to 60 hours a week, working day or night.

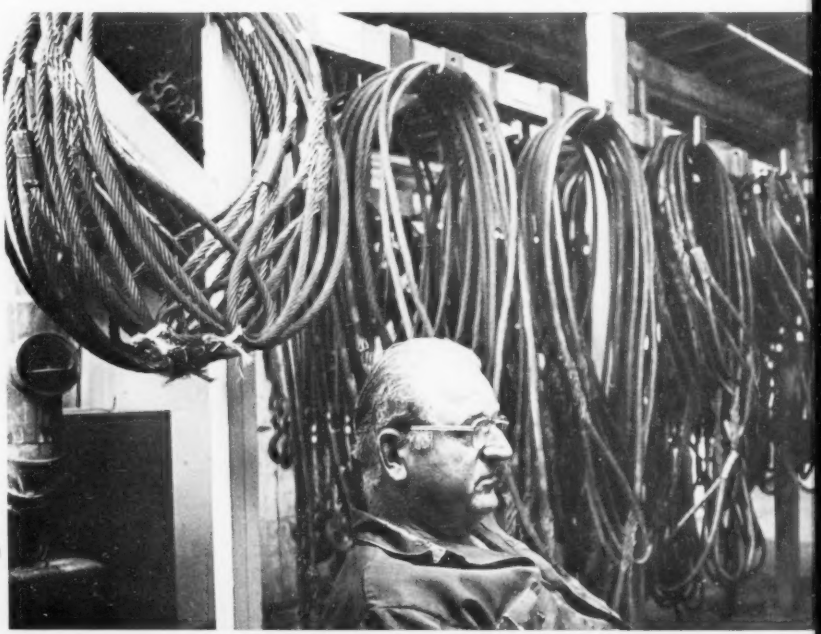
Technology has not made the riggers job much easier. Pulleys, blocks and tackles, cranes and many more sophisticated items of equipment limit the need for muscle power. But, there is still a need for rigger skills.

Fiber rope still is spliced by hand although wire rope is done by machine. To make a wire sling by hand would take 30 minutes. With a machine it only takes two minutes, but there is still a need for the hand-spliced sling.

"The hand splice is tapered which means one end will slip under heavy equipment without catching. On a machine-made splice a blunt ended lug is slipped over the wire and clamped together to make the loop. This is completed with very heavy machine pressure," said Jim Burnett, a rigger foreman.

The rigging loft at Port Hueneme is located in a long nondescript gray building that looks somewhat like a giant Quonset hut. Walking through the large double doors is like turning back 30 years. The loft is framed and supported by heavy timbers aged to a mahogany brown. In the center of the high arched ceiling are two long rows of windows which allow light to filter down. On the right is the stevedore locker.

The locker is John Licht's domain. John is retired from the Navy, in his 50s and has been a rigger for 14 years. He keeps track of the many different lengths and thicknesses of slings and



The locker is ex-Navy man John Licht's domain.

lines used to move equipment. Standing beside a table with two short lengths of pipe sticking out, John reaches for his worn gloves. Riggers wear out maybe six pairs a year. He grabs a length of cable, slides the loop over one pipe, wraps the length of cable around both pipes and then hangs the cable on its appropriate hook.

Upstairs is new equipment, some still coated with preservative. In a corner are a dozen or so shovels with C.C.C. (Civilian Conservation Corps) and Public Works Administration stamped on them. They are holdovers from the "New Deal" days of the 1930s.

Just aft of the stevedore locker and past the office space in the overhead is what used to be an old sail locker. A large room with many windows, it offers a vivid contrast to the floor below. With a huge one horsepower sewing machine maybe 40 years old, Felipe Porras sews canvas or vinyl covers for machinery.

As machines replace many craftsmen, the art of rigging is dying out. But even today, a man is not considered a rigger until he can splice a line by hand.

Rigging techniques live because old timers willingly pass their unique skills to younger men.

With the advent of the container ship, the barge carrier, the roll-on, roll-off ship, and other specialized carriers, it is obvious that the demand for skilled riggers will continue to decrease. It's a tough job, physically demanding and often dangerous. The rewards are often personal—the self satisfaction that comes from doing a job well. But, it is also obvious that riggers are somewhat like General MacArthur's old soldiers who never die but just fade away. They will be around as long as they are needed.

⚓

Felipe Porras has tales to tell after 28 years at his trade.

Photographer's Mate 2nd Class David Fraker has been attached to the Naval Construction Battalion Center at Port Hueneme, Calif. for the past year and a half.

Fraker, 32, of Rockville, Md. is married and has two children. "I have two concerns in my life—my photojournalism and my family," he said.

In 1977 Fraker completed a one-year course in photojournalism at Syracuse University. He has been in the Navy for five years and has been a photographer for eight years.

He first became interested in photojournalism about three years ago. He has had several photo essays published in Navy Times.

Smithsonian Exhibit Features America's Maritime History

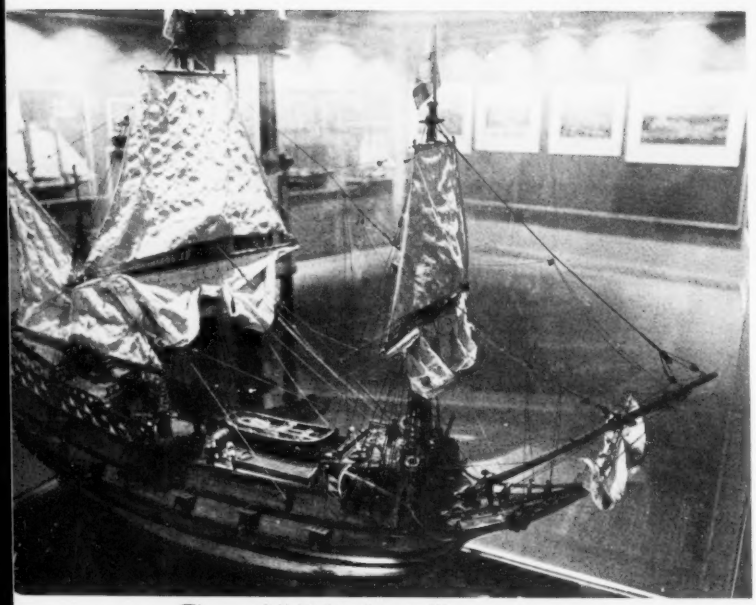
Photos by Russ Egnor

The Smithsonian Institution has weighed anchor for a three-century voyage with sights, sounds and even smells from America's maritime history.

It is all there in the new Hall of American Merchant Marine Enterprise, part of the Smithsonian Museum of History and Technology in Washington, D.C.

The 12,000 square-foot exhibit took four years to complete. Ship models, period rooms, audio-visual devices and small theaters combine to tell the fascinating story.

Smithsonian historians acquired thousands of objects from private



The exhibit begins with a replica of the Mayflower.

Sailors were superstitious about ship figureheads.

"A NIGHT TO REMEMBER"

One of the biggest news stories of the early 20th century, the Titanic disaster still remains vivid in popular consciousness.

San Francisco Chronicle.

GIGANTIC LINER TITANIC SINKS; 1500 LOST

OF 2200 SOULS ABOARD ONLY 866 ARE RESCUED

Women and Children Placed in Life Boats Are Picked Up

LOSS OF FLOATING PALACE ON HER MAIDEN VOYAGE WORST DISASTER IN MARINE HISTORY

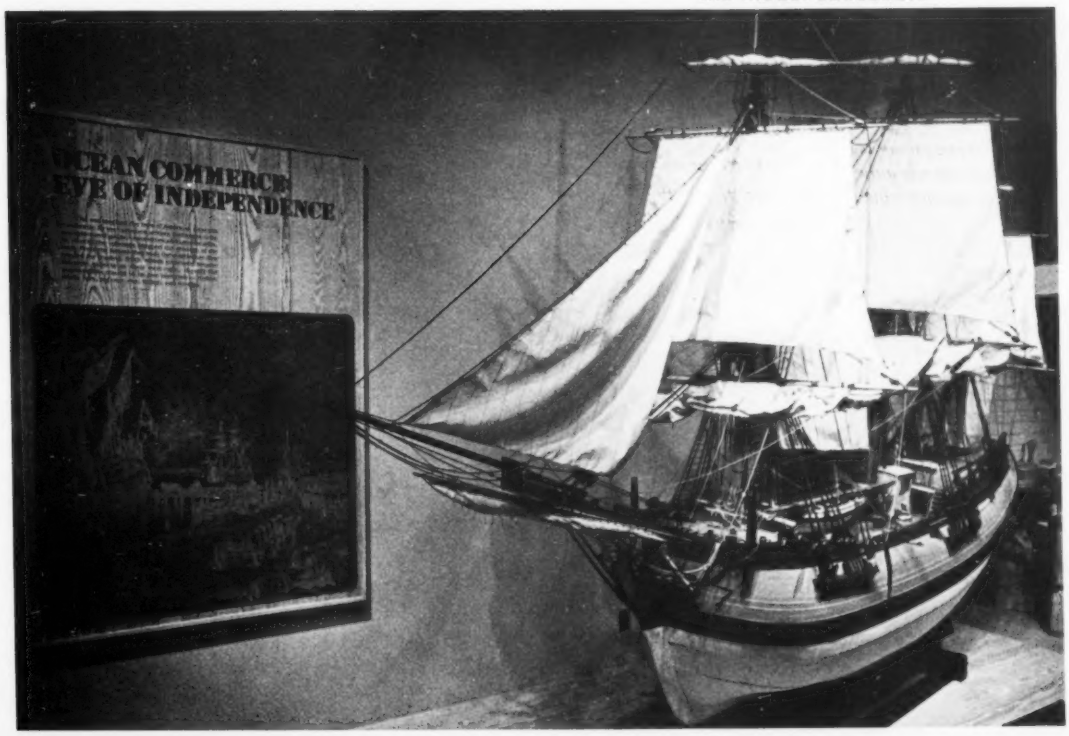
Titanic Goes Down Soon After Colliding With Wall of Ice in the Ocean Graveyard—Women and Children Are Rescued by Steamship Carpathia

MEN ON THE TITANIC MAKE VAST FORTUNES

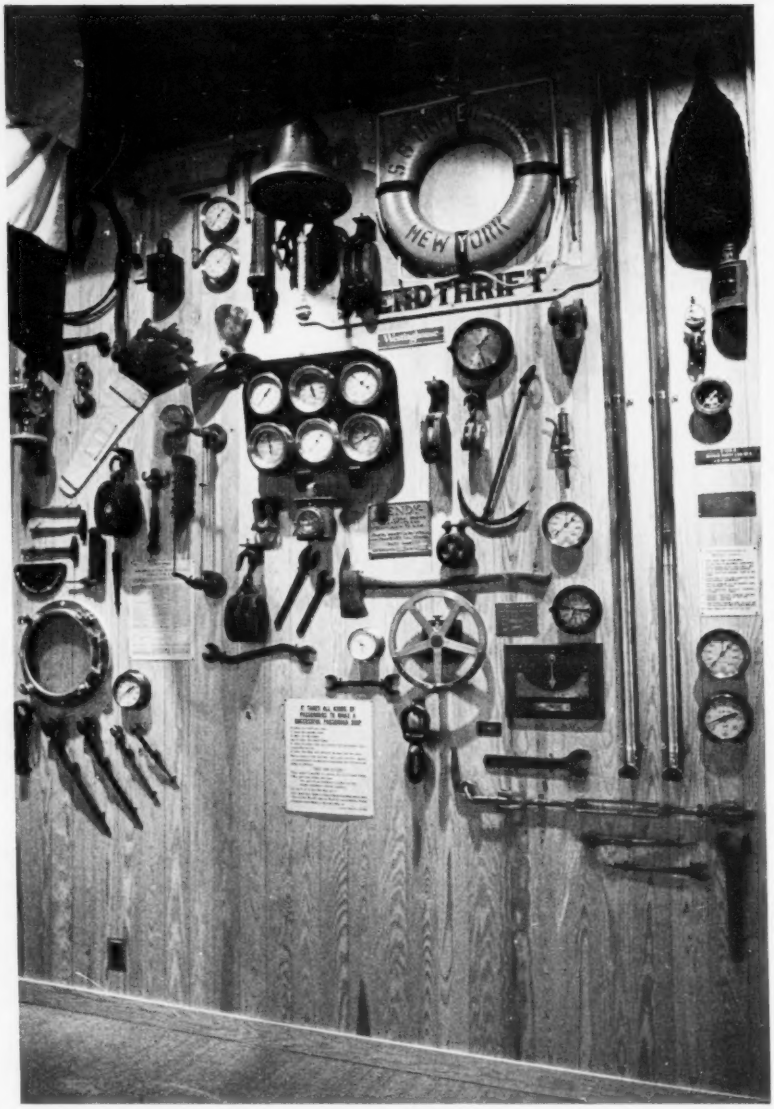
One display features one of the biggest news stories of the 20th Century.

Visitors rest on a buoy while watching a movie on the back wall.

A big feature of the exhibit is the model collection.



Thousands of maritime artifacts are exhibited.



collections, museums, maritime companies and on-site locations to make the exhibit a reality.

The exhibit even has a distinctive combination of smells that will bring nostalgia to those who have been to sea—those of tarred rope, hemp and weathered timber.

The story of American shipping could start in no better way than with the Mayflower, the 90-foot vessel that brought the Pilgrims to America. A model of the 15th century Mayflower is located at the entrance to the new hall.

Several figureheads of women also decorate the hall entrance. There was a time in sailing ship days when a sailor might refuse to sign for a voyage unless a ship had a figurehead for that ornament meant good fortune. A mishap to a figurehead was considered a bad omen.

A central feature of the hall is the national watercraft ship model collection started in 1884 by Capt. Joseph W. Collins. Museum curators consider the collection one of the finest in the world. It consists of hundreds of models of schooners, clipper ships, fishing crafts and river boats.

One of the largest models in the hall is the Brilliant, a three-masted tobacco ship built in Hampton Roads, Va., that sailed during the American Revolution. The model is one-tenth the size of the original ship. But, next to it is a full size replica of the Brilliant's lower foremast.

Several period rooms in the hall depict varied maritime activities. There is an 18th century warehouse from a Virginia port where hogsheads stand next to an aromatic heap of tobacco leaves and coils of tarred rope.

A marine insurance office of the 1880s has been recreated with authentic furnishings and decorations of the time. Also from that period is a skylight of stained glass recovered from the luxury liner Majestic.

Near the end of the exhibit is a complete tattoo parlor and a visitor can watch a seaman get tattooed. Well, not really. The seaman is only a mannequin and a special projector adds authentic tattoos to the mannequin until it is covered with ornate designs of flowers, hearts and anchors.

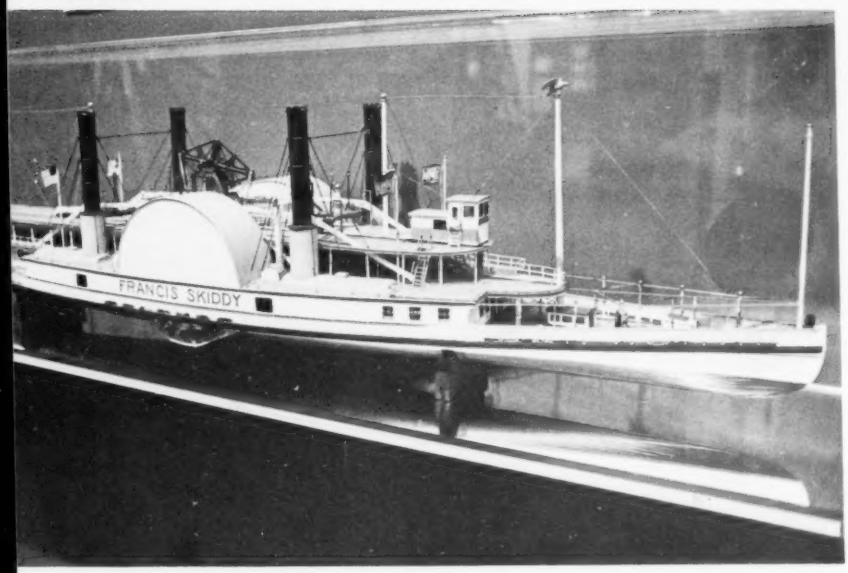
The hall is divided into 10 sections, each illustrating a different facet of American maritime history. Numerous works of art displayed throughout the hall depict nautical scenes, noted inventors or maritime leaders.

Two full-sized exhibits stir the imagination of the young and old. One is a modern towboat pilot house. The other is the working engine room of the Coast Guard ship S.S. Oak.

In the pilot house, visitors see the equipment used to operate the vessel along inland waterways and view a film of passing scenery which gives the impression of ship movement along a major river.

Visitors enter the deckhouse of the Oak, a ship that tended buoys from the 1920s until the 1970s when it was

This model is part of a display of steamboats on the Hudson.

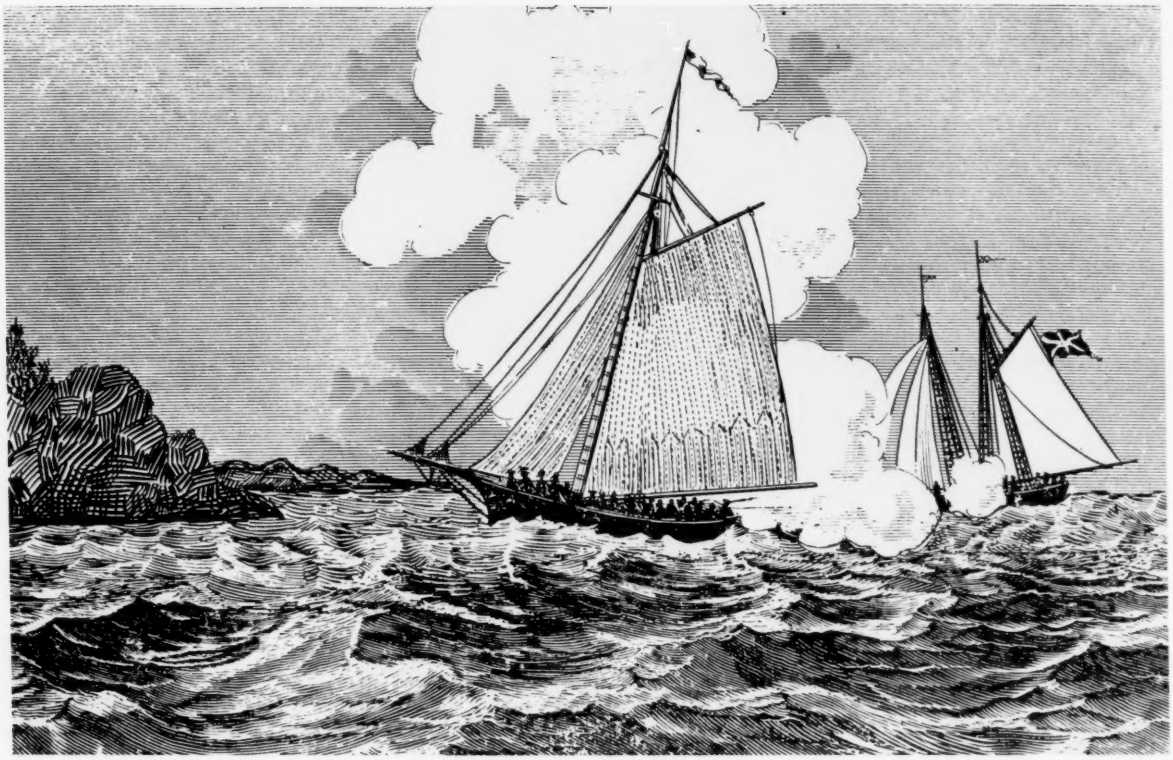


taken from service and turned over to the Smithsonian.

The final theme area of the hall covers World War II. A documentary film shows wartime shipyards going full blast with round-the-clock shifts of welders and riveters building Liberty ships in record time. The ships are launched with the emotional voice of President Franklin Delano Roosevelt urging shipyard workers and the nation to win the war. ⚓

A 28-foot whaling boat adds realism to a panoramic whaling scene.

Privateer sloop Unity (left) captures a British armed vessel in 1775.



Privateers Helped Gain American Independence

By Paul Woodall

At the outbreak of the American Revolution, colonists rebelling against the British crown desperately needed a naval force. And it was obvious that if they were to be effective against the British at sea they would have to rely on private ships manned by merchant seamen.

When the Second Continental Congress authorized the outfitting of military ships in October 1775 there was no difficulty finding seamen to fight for the revolutionary cause.

The problem was training the raw recruits who responded to the call to join the nation's first Navy. There was no doubt that the colonies had a wealth of able seafarers. Most American settlers had come from the maritime nations of Europe. But they were not volunteering in any great number.

Experienced seamen were signing up with private ship owners whose ships were pressed into service. The ships had been built for commercial purposes and were of all shapes and sizes.

Fortunately for the colonials, shipbuilders had been turning out vessels that were speedy and maneuverable. They could outrun a lumbering merchantman and hold their own against all but the fastest British cruiser.

These were the ships known as privateers. Their primary purpose was to harass the British and capture their merchantmen, and thereby disrupt their supply lines. Serious fighting was avoided. The capture of British ships meant big money for the privateers and there was no conflict between patriotism and the profit motive in the rebellious colonies.

The Navy had to rely on crews made up for the most part of farm boys, shanghaied derelicts, paroled

prisoners and runaway apprentices.

A troubled George Washington wrote: "The plague, trouble and vexation I have had with the crews of all the armed vessels is inexpressible. I do believe there is not on earth a more disorderly set."

The Navy did attract some singularly talented young officers like John Paul Jones, destined to become one of the nation's first naval heroes. The Navy that Jones entered was not only lacking in experienced manpower but in seaworthy ships as well. The historian Samuel Eliot Morison described what Jones found.

"It was not much of a Navy in which Paul Jones received his lieutenant's commission, only a haphazard collection of converted merchant ships. But it was the best that anyone could fairly expect."

It became obvious at the very start of the Revolution that private ships manned by skilled seamen would have to back up the Navy in any offensive action against the British at sea.

It was not difficult to find crews for privateers. Beyond the spirit of adventure that was sure to appeal to some, there was the lure of prize money that the Navy could not match.

During the war years a rivalry of sorts sprang up between the privateers and the Navy. Many seamen preferred to serve aboard privateers where there was less discipline. The heavily sparred privateer also could outmaneuver a powerful enemy ship—a more difficult feat for a Navy ship and crew.

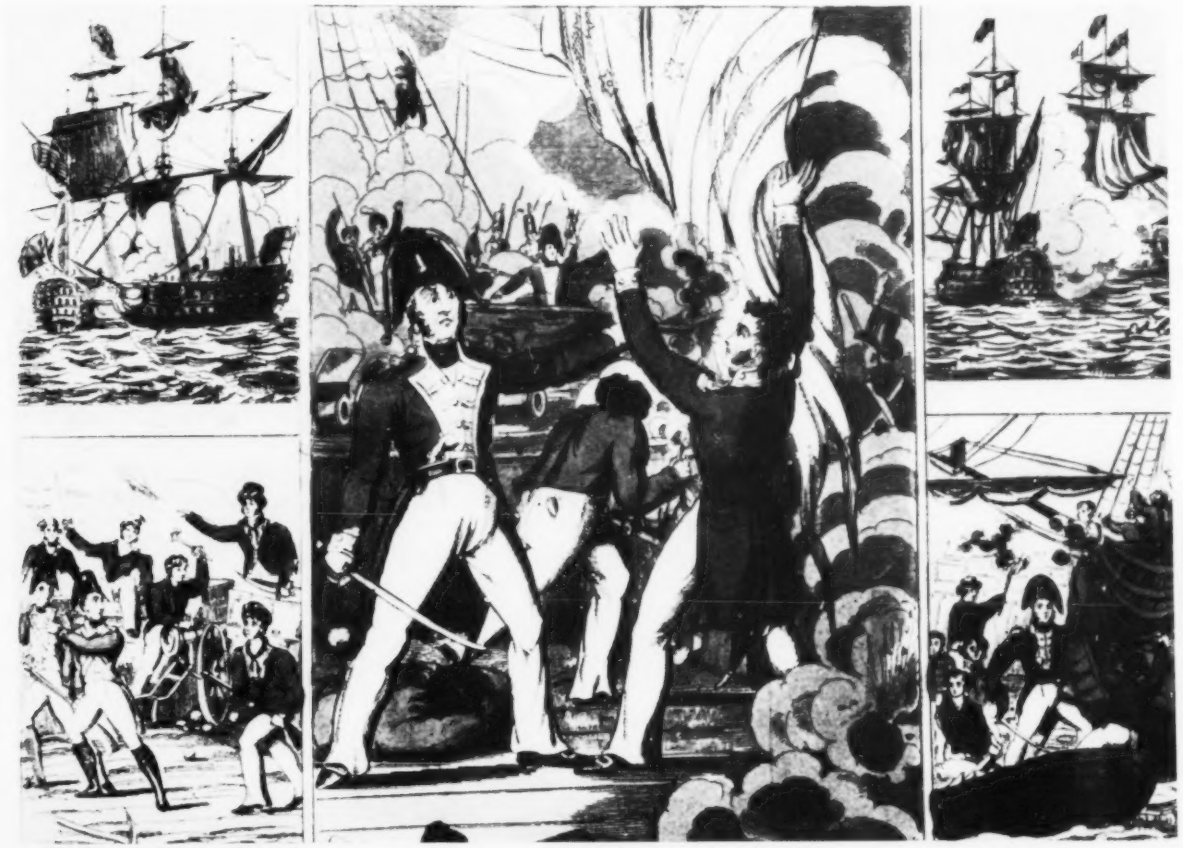
Approximately two thousand privateers sailed out to plunder British commerce and to obtain supplies for their fellow countrymen.

The popularity of privateers made it difficult for Paul Jones and his fellow captains to recruit men in seaport towns and they complained that privateers persuaded Navy men to desert.

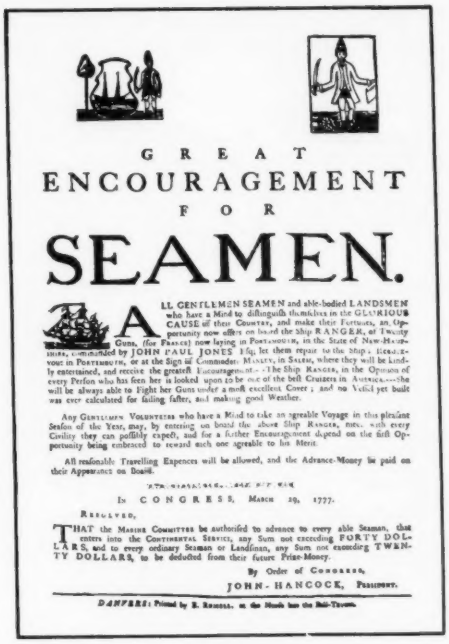
When the war began, there was a flurry of activity among the seafarers. Merchantmen too slow and unwieldy for warlike enterprises were stripped of their armament while those that were fit for active duty received extra ordnance.

Money gained from the seizure of enemy or "prize" ships was most effective in enticing men to sign aboard a privateer. A captured ship with a valuable cargo meant money to the privateer owners and varying percentages to the officers and crew.

The largest share went to the owners to reimburse them for the



Exploits of John Paul Jones were romanticized in art and literature.



GREAT
ENCOURAGEMENT
FOR
SEAMEN.

ALL GENTLEMEN SEAMEN and able-bodied LANDSMEN who have a Mind to diſtinguiſh themſelves in the GLORIOUS CAUSE of their COUNTRY, and make their Fortunes, an Opportunity now offers on board the Ship RANGER, of Twenty Guns, (for France) now laying in PORTSMOUTH, in the State of New-Hampſhire, commanded by JOHN PAUL JONES Eſq; let them repair to the Ship's Rendezvous in PORTSMOUTH, or at the Sign of Commodore MAGEE, in SALEM, where they will be kindly entertained, and receive the greateſt Encouragement.—The Ship RANGER, in the Opinion of every Perſon who has ſeen her is looked upon to be one of the beſt Cruizers in AMERICA.—She will be always able to fight her Guns under a moſt excellent Cover; and no Veſſel yet built was ever calculated for ſailing faſter, and making good Weather.

Any GENTLEMEN VOLUNTEERS who have a Mind to take an agreable Voyage in this pleaſant Seaſon of the Year, may, by entering on board the above Ship RANGER, &c. with every Civility they can poſſibly expect, and for a further Encouragement depend on the firſt Opportunity being embraced to reward ſuch one agreable to his Merit.

All reaſonable Travelling Expences will be allowed, and the Advance-Money be paid on their Appearance on Board.

[illegible]

IN CONGRESS, MARCH 29, 1777.

RESOLVED,

THAT the MARINE COMMITTEE be authoriſed to advance to every able Seaman, that enters into the CONTINENTAL SERVICE, any Sum not exceeding FORTY DOLLARS, and to every ordinary Seaman or Landſman, any Sum not exceeding TWENTY DOLLARS, to be deducted from their future Prize-Money.

By Order of CONGRESS,

JOHN HANCOCK, PRESIDENT.

DANFORTH: Printed by B. RUSSELL, at the Mouth but the Bell-Tavern.

Congress issued posters calling for men to join the nation's Navy.

costs of outfitting and manning a privateer while running the risk of losing her to a British warship.

One or two successful voyages could earn fortunes for the owners. Even the lowly cabin boy stood a chance of making more money on one voyage than he could earn ashore in several months.

In the Navy it was a different story. Morison wrote that competition with privateers and squabbles over prize money continued to bedevil Congress and the Navy throughout the war, and for many years after the war was over.

"What proportion of the captors' 50 per cent, for instance, should each officer and man have? And how should prize money be divided among a fleet?" Morison wrote.

With Congress taking half of the proceeds of any capture by a Navy vessel, seamen preferred to sail on a privateer which divided a full share of the spoils within the company.

Some considered a privateersman a licensed pirate. The license was a commission or letter of marque issued by a government at war that empowered vessels to capture or destroy any enemy ships which they encountered.

To the British government, American privateering was considered piracy since England did not recognize the new American government. Imprisonment was harsh for captured privateersmen, even when they were not hanged as pirates.

Wallabout Bay, at the New York naval shipyard, gained an evil reputation for the prison ships anchored there for almost seven years. An estimated 11,000 American seamen died in these prison hulks. Many were buried along the beaches and muddy flats of the bay. Every day the survivors would venture forth to bury fellow prisoners who had died the night before from disease and malnutrition.

American and British prisons were a disgrace in the 18th century, but even the filthy disease ridden peacetime jails at their worst paled by comparison to the prison ships. Occasionally, efforts were made to improve or ease the prisoner's lives, but the record remained a black one with little credit to the naval, military or civilian authorities.

Privateers were noted for their large crews for it was necessary to man any vessel which the privateer might seize. The captured ship's officers were usually taken aboard the privateer while their crew was placed below decks on the prize.

Extra precautions were necessary to prevent the escape of the captured crew and leg irons were not uncommon. In some instances, however, the captured crews were able to break their bonds, overpower their captors, and take command of their ship once again.

A good privateersman needed to have a combination of gall, guts, bluff, bravery, good seamanship and a large amount of luck.

Silas Talbot came from a Massachusetts background and began his life at sea as a cabin boy at the age of 12. By 21 he was master of his own ship and had built a house in Providence, R.I.

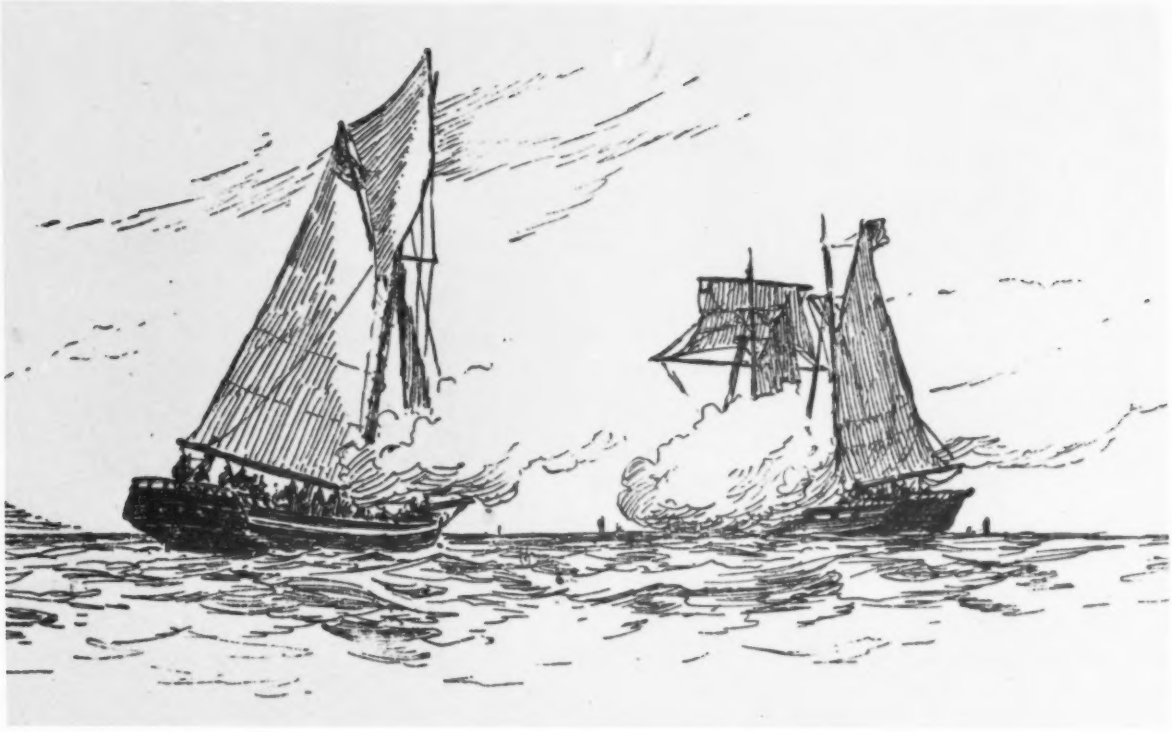
After serving as a captain in the Army in 1775 around Boston, he volunteered for duty with the fire ships in New York. Their purpose was to destroy the British warships in the Hudson River.

Talbot was wounded twice, badly burned, and was promoted to major. At George Washington's suggestion in 1778, Talbot was given command of a small sloop, Argo. Fitted with 12 six-pounders, it pursued Tory privateers.

Talbot later had to surrender to the British and was imprisoned aboard the Jersey. He was transferred to England aboard the Yarmouth in a hold crammed with 70 other men and officers for 53 days. Eleven men died during the voyage, after which Talbot was put in prison. After his release, he sailed from France aboard an American brig only to be captured two weeks later by a British privateer. The captain apparently treated his prisoners well. Deciding that Talbot had suffered enough, he placed him aboard an English brig bound for New York. Talbot eventually made his way home to Providence and in later years, as a Navy captain, commanded the frigate Constitution.

Privateers produced many other outstanding officers for the Continental service and the United States Navy. Men, such as David Porter,

A nameless merchant sloop chases a British vessel off the coast of Maine.



Stephen Decatur, John Barry, and Thomas Truxton all served on privateers at one time or another.

E. B. Potter and Chester W. Nimitz, editors of the book, Seapower, had no doubt that the privateers played a key role in defeating the British. "Privateers made by far the most effective contribution to the American naval effort," they stated.

"While the individualistic American seaman took rather badly to the disciplined life of a regular Navy , his ingenuity and resourcefulness fitted him admirably for the life of a privateer, and the opportunity for profit was so attractive that the Continental Navy found itself unable to compete with privateersmen for crews."

The success of the privateers in helping defeat the British is illustrated by the number and values of vessels they captured.

E. S. Maclay in his History of American Privateers estimated the value of captures made by American privateers at $18 million. He noted that in a single cruise the privateer Rattlesnake took prizes worth more than $1 million.

American trade also suffered from English privateering. But American ships taken by the British privateers were fewer and many were small vessels sailing in the coastal trade.

According to figures provided by Lloyds, the British lost 2,980 vessels and privateers during the war compared to 1,351 lost by the Americans, of which 216 were privateers.

Accepting an average estimated ship value set by Maclay at $30,000, the British loss amounted to about $90 million. Their net loss was $50 million.

It is any historian's guess as to how much longer the Revolution might have lasted without the aid of the enterprising privateers of early America. But, it is obvious that their success made the road to American independence a shorter one. ⚓

Ships are built by men but computers help make the job easier, according to executives of Marinette Marine Corp., Marinette, Wisc. Marinette built this commercial Artubar tug as well as the first of seven oceangoing Navy tugs to be operated and manned by MSC. Related stories on pages 5 and 8.

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